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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,334	03/12/2004	Frank J. Salvi	27124-2	6221

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EXAMINER	
SZMAL, BRIAN SCOTT	
ART UNIT	**PAPER NUMBER**
3736	

MAIL DATE	DELIVERY MODE
08/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/799,334	SALVI ET AL.	
	Examiner	Art Unit	
	Brian Szmal	3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *17-20* is/are allowed.

6)☒ Claim(s) *1,2,4,6,7,9 and 14-16* is/are rejected.

7)☒ Claim(s) *3,5,8 and 10-13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 7, 9, 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Carter et al (6,554,781 B1).

Carter et al disclose a spinal monitor apparatus and further disclose an elongated member adapted to be disposed longitudinally adjacent to the patient's spine and further adapted to be flexible in the midsagittal plane and substantially inflexible in the frontal plane; a first sensor mounted to the elongated member and disposed to monitor flexion and extension motion of the patient's spine in the midsagittal plane; a second sensor mounted to the elongated member and disposed to monitor lateral motion of the patient's spine in the frontal plane; the first sensor includes at least one strain gage; the elongated member includes a blade having a width in the fontal plane and a thickness in the midsagittal plane, wherein the width is greater than the thickness; the first sensor is

adapted to be disposed along the patient's spine at approximately the location of the 1st sacral vertebrae; and the second sensor remains substantially stationary in the frontal plane during lateral motion of the patient's spine in the frontal plane. See Figures 20 and 21; Column 11, lines 30-37 and 55-59; and Column 17, lines 16-65.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al (6,554,781 B1) as applied to claim 1 above, and further in view of Curchod (5,826,578).

Carter et al, as discussed above, disclose a means for measuring spinal motion, but fail to disclose the use of an optical sensor.

Curchod discloses a motion measurement apparatus and further disclose the use of an optical sensor; and moving a cursor based on the obtained movements. See Column 4, lines 11-15; and Figures 8A and B.

Since Carter et al disclose the use of wear resistant sensors, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Carter et al to utilize an optical sensor to monitor motion, as per the

teachings of Curchod, since it would provide another means of monitoring motion of the spine.

Allowable Subject Matter

5. Claims 3, 5, 8, 10 and 11-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: Claim 17 is allowable since no prior art could be found teaching or suggesting a second sensor is mounted to the elongated member near the second end.

Response to Arguments

7. Applicant's arguments filed June 29, 2007 have been fully considered but they are not persuasive. The Applicants argue that Carter et al fail to disclose the current claimed invention because Carter et al fail to disclose a first sensor and a second sensor "mounted to the elongated member". The Applicants further argue that the first and second sensors of Carter et al are mounted to a backing plate (106) and not to the elongated member (107). The Examiner would like to point out that while the first and second sensors are mounted to the backing plate, they are also mounted to or affixed to the elongated member. If the first and second sensors are not mounted to or affixed to the elongated member, the device of Carter et al would be inoperable, due to the fact

that the sensors would not be able to effectively measure the forces in the frontal and midsagittal plane in order to determine the motion of the lumbar spine. Therefore, Carter et al clearly anticipates the current claims.

8. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Carter et al disclose the use of a sensing means to determine a relative motion of a body part. Curchod also discloses a sensing means to determine a relative motion of a body part, utilizing optical sensors. Furthermore, Carter et al discloses displaying an output of the measured movements, while Curchod et al also discloses displaying an output of the measured movements.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Szmal whose telephone number is (571) 272-4733. The examiner can normally be reached on Monday-Friday, with second Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BS

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